In the Specification

Please insert the following paragraph at page 1, line 1:

This application is a continuation of U. S. Patent Application Serial No. 09/879,347, filed June 12, 2001.

Please replace the paragraph beginning at page 2, line 14 with the following:

As known, data on a standard device can, for a variety of reasons, become corrupt. As described in the foregoing U. S. Patent No. 6,101,497, a restore or an incremental restore command initiates a restoration procedure that copies data from the redundant BCV physical mirror to the standard device, assuming that data on the BCV physical mirror has not been changed. For example, a BCV physical mirror used as a source for a tape backup will maintain the data without change. In this situation, the data on the BCV physical mirror represents the data that existed when the BCV physical mirror was isolated from the standard device. So it does not represent the data that actually exists on the standard device if an event occurs that requires restoration; rather it represents the data that existed at some earlier point in time.

Please replace the paragraph beginning at page 9, line 3 with the following:

FIG. 2 schematically depicts the STD(M1) 20 and BCV physical [mirrors 20 and ]mirror 22 in the data storage facility 13 in different states that characterize this invention. A first state 23 exists after it is determined that corrupted data is stored in the standard device represented by the STD(M1) physical mirror 20. In the following description references to the STD(M1) physical mirror 20 are intended to be references generally to the standard device including the STD(M2) physical mirror 21. During state 23 the BCV physical mirror 22 attaches to the STD(M1) physical mirror 20 using many of the steps of a restore operation as defined in U. S. Patent No. 6,101,497. During the restore operation at state 24, the data in the STD(M1) physical mirror 20 synchronizes with the data in the BCV physical mirror 22 so the data in standard device fixed mirrors, such as the STD(M1) physical mirror 20, corresponds to the data as it existed at a prior time, as when a last split operation occurred with respect to the BCV physical mirror 22.

Please replace the paragraph beginning at page 10, line 5 with the following:

In accordance with this invention, a command, called a PROTECTED RESTORE command, provides a data recovery procedure in which the data copy on the BCV physical mirror 22 remains unchanged during a data recovery operation and in which restoration and update procedures occur concurrently. Initially and prior to any write operation from a host, the BCV physical mirror 22 operating capabilities are changed, so it operates in a read only mode as represented by symbol 26. Thus, as shown by state 25, any write request 27 updates the fixed mirrors, such as the STD(M1) physical mirror 20, but can not alter the data on the BCV physical mirror 22. Any write request that causes an error during the update procedure, such as unrolling the redo logs, will not change the data in the BCV physical mirror 22. In that event another data recovery operation can be initiated for producing the states 23 and 24 [can occur ]without having to access other media or storage devices.

Please replace the paragraph beginning at page 13, line 10 with the following:

Initial entries in the STD device header 37 include certain flags relevant to different operations. WE1 through

WE4 flags 42 through 45 are of particular importance to this invention. Each flag denotes whether the corresponding physical mirror is write enabled. The cylinder block 41 also contains a list of all the cylinders associated with the standard device, such as a cylinder entry 47. Each cylinder entry has the same format; the cylinder entry 47, for example, comprises a header 50 and a Track ID Table [[51 ]]52 for each track in the cylinder. Each track entry, such as a track entry 52, includes M1 through M4 mirror bits 53 through 56 and a pointer (PTR) 57 to a cache slot. An In-Cache (IC) flag 60 indicates whether the data for that track is in the cache slot 31. Other flags and entries also may be included.

Please replace the paragraph beginning at page 15, line 18 with the following:

A PROTECTED RESTORE can initiate either be a full or incremental restoration procedure as part of the data recovery operation. The differences between a full and incremental restoration procedures are described in U. S. Patent No. 6,101,497. For a full restoration procedure, where all the data in the backup will be transferred to the standard mirrors, step 106 transfers control to step 107. Step 107 sets to invalid all the entries in the corresponding track ID table for the standard STD(M1) and STD(M2) fixed physical mirrors. In

the specific example of FIG. [[1]]3, step 107 sets all the M1 and M2 flags 53 and 54 to an invalid state. Step 108 then sets all the entries in the corresponding track ID table for the BCV moving physical mirror to a valid state. Thus, after steps 107 and 108 are processed, all the M1 and M2 bits in the track ID table associated with the fixed physical mirrors in the standard device are set to an invalid state while all the corresponding bits in the moving physical mirror are all set to a valid state.

Please replace the paragraph beginning at page 19, line 14 with the following:

If a PROTECTED RESTORE command is being processed in accordance with this invention, the BCV physical mirror 22 is not write enabled so the state of the WE3 bit, in this example, indicates that condition. Step 131 then transfers control to step 134. Step 134 accepts the write request in a cache slot in the write pending slots 30 of FIG. 3. Step 135 then sets the write pending bits for each write enabled mirror in the standard device. In the specific example of FIG. [[1]]3, step 135 sets the WP, WP1 and WP2 write pending flags 35 and 36, but not the WP3 write pending flag 37.